



# *X-Plain™*

## *Tennis Elbow*

### **Reference Summary**

Tennis elbow is a painful condition that affects tennis players as well as patients who use the arm repeatedly. If tennis elbow becomes painful and is left untreated, loss of function and motion can develop.

Non-surgical treatment options are almost always successful. Surgery can be done as a last resort. This reference summary will help you understand better the treatment options for tennis elbow as well as the risks and benefits of surgery.

### **Anatomy**

The elbow is a joint, which helps flex the arm and rotate the palm of the hand up and down.

Three bones form the elbow: The upper arm bone or humerus, and two forearm bones: the radius and the ulna.

Muscles make the bones move at the joints. Muscles are attached to bones by tissue called tendons.

The two bony knobs at the top of the humerus are called epicondyles. Tendons attach to the humerus at the epicondyles.

The tendons and muscles that attach to the epicondyle help extend the wrist and fingers.

When these tendons become inflamed and painful, a condition arises called lateral epicondylitis, or tennis elbow.

### **Symptoms And Their Causes**

Lateral epicondylitis is known as “tennis elbow” because many tennis players have developed this condition.

Tennis elbow occurs from repetitive grasping and squeezing activities that over-exercise the elbow. This causes inflammation of the tendons attached to the lateral or outside epicondyles.



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Sometimes tennis elbow can occur because of a slight tear in a tendon or after severe trauma to the elbow.

Because the injured tendons extend the wrist and fingers, the pain occurs during repetitive movement of the wrist. This causes arm pain and possibly hand pain.

Examples of such activities include using a screwdriver, hammering, and using scissors.

For some patients, the pain may also be present during rest or at night.

Because the hand is used frequently, it is difficult for the patient to rest the hand allowing the inflamed tendons to heal.

## Diagnosis

Your doctor will first examine your elbow and ask you questions.

X-rays may be taken to make sure there are no fractures causing the symptoms.

Tennis elbow does not lead to serious health problems but if left untreated, the pain may become chronic and more difficult to resolve.

## Alternative Treatments

Usually alternative treatments are tried first and most cases of tennis elbow get better without surgery. Activities that cause pain can be modified. For instance, tennis players can try changing the grip size of their racquet. Modification of activity may also include resting or limiting activities that use the arm and hand.

Using ice can help limit pain and decrease inflammation. Ice can be applied directly or the area can be massaged with an ice bag several times a day for about 20 minutes, particularly after activities that cause pain. Stretching and exercising the muscles controlled by the elbow help to strengthen the muscles and reduce pain. These exercises are usually done at home, but can be performed with a physical therapist for severe cases.



Tennis elbow straps may help reduce the stress on the tendon and reduce pain. They are used during physical activity and in conjunction with a stretching and strengthening program for the elbow. Wrist braces may also be used to keep the wrist neutral, reducing stress on the tendons.

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Over-the-counter medications that fight inflammation can also reduce pain. These include Motrin® or Advil®. Prescription medications for fighting inflammation are also available and may be prescribed by your doctor after discussing their side effects.

Another treatment prior to surgery is to try cortisone shots. The cortisone is injected into the tendon to decrease the inflammation. More than one shot may be needed.

When alternative treatments fail and the pain continues to be severe or prevents activity, surgery may be recommended.

## **Surgical Treatments**

The procedure is done under general, regional, or local anesthesia. An incision is made over the epicondyle and the involved tendon is trimmed.

In an alternate procedure, the surgeon may decide to release the tendon from the bone and reattach it.

Your surgeon will decide which procedure is appropriate for you.

After you wake up from anesthesia, you will rest in the recovery area. In most cases, the operation is an outpatient procedure. This means you will go home the same day of the surgery.



## **Risks And Complications**

This operation is very safe with excellent results.

There are several possible risks and complications, which are unlikely, but possible. You need to understand these risks in case they happen. By being informed, you may be able to help your doctor detect complications early.

The risks and complications include those related to anesthesia and those related to any type of surgery. Risks of general anesthesia include nausea, vomiting, urinary retention, cut lips, chipped teeth, sore throat, and headache. More serious risks of general anesthesia include heart attacks, strokes, and pneumonia.

Your anesthesiologist will discuss these risks with you and ask you if you are allergic to certain medications.

Some of the risks are seen in any type of surgery. These include:

- Infection, deep in the arm or at the skin level.

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- Bleeding
- Skin scar that may be painful or unsightly.

Other risks and complications are related specifically to this surgery. These risks are very rare, but it is important to know about them.

Nerves may be injured, resulting in weakness, paralysis, and loss of feeling in the arm or hand.

The tendons may be injured, resulting in weakness of the hand or wrist.

There is also the possibility that the operation may not help the symptoms or may even make them worse. After a successful treatment, it is also possible for the symptoms to recur.

## **After Surgery**

An arm splint will be used. Keep your arm elevated and dry.

Stitches are usually removed in 10 to 14 days. Physical therapy is then started.

Your doctor will advise you on when you can go back to work. This depends on the extent of the surgery and your condition.

Most patients cannot drive for a week.

Four to five weeks after surgery, the patient may find out if the pain is totally relieved after activity. Full recovery and heavy use of the elbow and arm may take several months.

The surgery is usually successful, but for some patients it may not relieve the pain.

## **Summary**

Tennis elbow is tendonitis of the tendons arising from the epicondyle. If not treated, the inflammation and pain may increase, and the condition could become chronic.

Several alternative treatments may be tried before surgery to reduce pain and inflammation.

In almost all cases non-surgical treatment is effective in resolving the problem. In those few patients with persistent pain, surgery may be recommended.

Surgical treatment is usually successful in relieving the pain caused by tennis elbow and allows the patient to return to normal physical activity. Like any surgery, risks and complications are involved. By knowing about them you may be able to detect and treat them early.

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